

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently amended): An error correction coding method for use with an
2 error correction coding apparatus, comprising the steps of:
3 subdividing data which include data of a plurality of sectors, to produce
4 subdivided data;
5 allocating the subdivided data in an arrangement of data;
6 coding ~~source~~ said arrangement of data for each predetermined size thereof using
7 a product code according to a code V and a code H and thereby generating a plurality of product-
8 code codewords; and
9 outputting code-H codewords of each of said product-code codewords in a
10 codeword-by-codeword manner ~~and~~ in an alternating fashion for said plurality of product-code
11 codewords such that between data of the same sector of an outputted code-H codeword, there
12 does not exist a data of another sector; wherein said source data includes data of a plurality of
13 sectors.

2 - 5. (Canceled)

1 6. (Currently amended): An error correction coding method ~~according to~~
2 ~~claim 1, wherein~~ for use with an error correction coding apparatus comprising:
3 ~~each of a plurality of sectors of source data includes a plurality of identifiers (ID);~~
4 ~~and~~
5 subdividing data which include a plurality of identifiers (IDs);
6 coding said subdivided data using a product code according to a code V and a
7 code H to generate a plurality of product-code codewords; and
8 ~~when outputting~~ code-H codewords of said product-code codewords ~~are~~
9 ~~outputted, a predetermined number of code H codewords~~

10 ~~each of which includes source data and a predetermined number of code H~~
11 ~~codewords each of which includes only redundant data are alternately outputted such in an order~~
12 ~~that the identifier each of said plurality of IDs exists at a predetermined interval in said outputted~~
13 ~~code-H codewords.~~

7. (Canceled)

1 8. (Currently amended): An error correction coding apparatus, comprising:
2 means for subdividing data which includes data of a plurality of sectors;
3 means for allocating subdivided data of said plurality of sectors in an arrangement
4 of data;
5 means for coding ~~source~~ said arrangement of data for each predetermined size
6 ~~thereof~~ using a product code according to a code V and a code H and thereby generating a
7 plurality of product-code codewords; and
8 means for outputting code-H codewords of each of said product-code codewords
9 in a codeword-by-codeword manner ~~and~~ in an alternating fashion for said plurality of product-
10 code codewords such that between data of the same sector, there does not exist data of another
11 sector.

9 - 10. (Canceled)

1 11. (Currently amended): An error correction coding apparatus ~~according to~~
2 ~~claim 8, further comprising means when source data includes a plurality of identifiers (ID);~~
3 means subdividing data which include a plurality of identifiers (IDs);
4 means coding subdivided data of said plurality of IDs using a product code
5 according to a code V and A code H to generate a plurality of produce-code codewords; and
6 ~~said means outputting, when code-H codewords of said product-code codewords~~
7 ~~are outputted, a predetermined number of code-H codewords each of which includes source data~~
8 ~~and a predetermined number of code-H codewords each of which includes only redundant data in~~

9 an order alternating fashion such that each of said plurality of identifiers ~~the identifier~~ exists at a
10 predetermined interval in said code-H codewords outputted.

12 - 17. (Canceled)

1 18. (New): An error correction decoding method for use in an error correction
2 decoding apparatus comprising the steps of:
3 inputting data of code-H code words with or without an error data, among data of
4 an input data sector of said code-H code words there do not exist data of sectors other than said
5 sector;
6 allocating said inputted data in an arrangement of a plurality of product
7 codewords according to a code V and a code H with or without an error data;
8 decoding said plurality of product codewords with said code V and said code H
9 thereby to correct error in said arrangement; and
10 providing data of said plurality of sectors from among said plurality of product
11 codewords corrected.

1 19. (New): An error correction decoding method for use in an error correction
2 decoding apparatus comprising steps of:
3 inputting data of code-H codewords with or without an error data including a
4 plurality of identifiers IDs existing at a predetermined interval in said code- H codewords;
5 allocating said inputted data in an arrangement of a plurality of product
6 codewords according to a code V and a code H with or without an error data; and
7 decoding said plurality of product codewords with said code V and said code H
8 thereby to correct error within said arrangement.

1 20. (New): An error correction decoding apparatus, comprising:
2 means inputting data of code-H code words with or without an error data, among
3 data of an input data sector of said code-H codewords there does not exists data of other sectors
4 of a plurality of sectors than said sector;

5 means allocating said inputted data in an arrangement of a plurality of product
6 code words according to a code V and a code H with or without an error data;
7 means decoding said plurality of product code words with said code V and said
8 code H thereby to correct error in said arrangement; and
9 means providing data of said plurality of sectors from among said plurality of
10 product codewords corrected.

1 21. (New): An error correction decoding apparatus, comprising:
2 means inputting data of code-H code words with or without an error data
3 including a plurality of identifiers IDs existing at a predetermined interval in said code-H code
4 words;
5 means allocating said inputted data in an arrangement of a plurality of product
6 codewords according to a code V and a code H with or without an error data; and
7 means decoding said plurality of product code words with said code V and said
8 code H thereby to correct error within said arrangement.

1 22. (New): An error correction decoding method according to claim 1,
2 wherein said code-H codewords are stored in a storage.

1 23. (New): An error correction decoding method according to claim 6,
2 wherein said code-H code words are stored in a storage.

1 24. (New): An error correction decoding apparatus according to claim 8,
2 wherein said code-H code words are stored in a storage.

1 25. (New): An error correction decoding apparatus according to claim 11,
2 wherein said code-H codewords are stored in a storage.

1 26. (New): An error correction decoding method according to claim 18,
2 wherein data read from said storage is inputted in said error correction decoding apparatus.

1 27. (New): An error correction decoding method according to claim 19,
2 wherein data read from said storage is inputted in said error correction decoding apparatus.

1 28. (New): An error correction decoding apparatus according to claim 20,
2 wherein data read from said storage is inputted in said error correction decoding apparatus.

1 29. (New): An error correction decoding apparatus according to claim 21,
2 wherein data read from said storage is inputted in said error correction decoding apparatus.